REMARKS

Claims 1-13, 15 and 17-35 are pending in the application. Claims 1, 21 30, 33 and 34 being the independent claims. Claims 1-13, 15 and 17-35 are rejected.

Claim Rejections - 35 USC § 101

Claims 1-13,15,17,19-26, and 28-35 are rejected under 35 U.S.C. 101 because the examiner indicated that the claimed inventions are directed to non-statutory subject matter.

Claims 18-20 and 27-29 have been cancelled. Accordingly, the rejection of claims 1-13, 15 and 17-29 is moot.

Regarding the rejection of claim 30, applicants respectfully disagree. The claim is, as the examiner stated, directed to an apparatus. There is not requirement that an apparatus (or a process for that matter) have a "physical transformation" as indicated by the examiner. Action, p.3. Applicants respectfully request reconsideration and withdrawal of the rejection.

Regarding the rejection of claim 34, applicants respectfully disagree. Claim 34 recites a transformation wherein it claims "presenting the characteristic vector to the classification chain, which returns an estimate of the spectral properties of the unknown sound." Accordingly, the claim takes the characteristic vector and returns an estimate of spectral properties. Applicants respectfully request reconsideration and withdrawal of the rejection.

Claim Rejections - 35 USC § 102

Claims 30-33 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Gjerdingen (USP 6,539,395).

The examiner previously indicated that:

> Gjerdingen teaches, in Fig. 4 and col. 6, lines 38-64, that various different data is collected and classified as acquired data. ***Expert data and DSP data are among the various***

> ***different data that is gathered*** into acquired data and placed in a research database. In light of this teaching, claims 30-33 now stand rejected under 35 USC 102(e).

Action dated 10-04-06, p. 3 (emphasis added.) The examiner now cites to a different portion of Gjerdingen as follows:

> *a classification chain data structure stored thereon having a plurality of classification vectors, wherein each vector includes data representative of a spectral properties class as classified by humans and spectral properties characteristics as determined by digital signal processing; and* (Col. 3, lines 50-54 and Col. 9, lines 28-39)

Action, p. 5, (italics in original).

The new citations within Gjerdingen do not cure the deficiency present in the first citation to Gjerdingen. Specifically, Applicants respectfully submit that the present invention, as recited in claims 30 and 33, requires a classification chain data structure, wherein each vector of the chain includes data representative of:

- ***spectral*** properties class(es) as classified by humans; **and**
- spectral properties characteristics as determined by digital signal processing.

Gjerdingen simply does not teach a classification chain structure or that the spectral properties classes as classified by humans that are then combined with spectral properties characterized by a DSP. Compare the specification of the present application. A relevant example is excerpted below:

> In an exemplary non-limiting embodiment, the fundamental properties of media entities, such as songs, are grouped into three main areas: rhythm, zing and mood. Rhythm may include tempo, time signature, rhythm description, rhythm type and rhythmic activity. In the case of mood, the sub-categories may include emotional intensity, mood and mood description. In the case of zing, the sub-categories may include consonance,

> density, melodic movement and weight. Once a trainee learns the nature of and how to recognize distinctions for these terms, a trainee becomes a groover and may classify new songs or song segments.

For at least the above reasons, Applicants request that the examiner withdraw the rejection of claims 30-33.

Claims 1-13, 15, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Blum and Kjaer, U.S. Pat. No. 4,603,386.

The Applicants previously pointed out that the MFCCs are not understood to be synonymous or the same as critical band filtering. MFCC calculations are derived from the fast fourier transform (FFT)/discrete cosine transmform (DCT) calculations wherein frequencies are not subject to critical band filtering but are instead placed logarithmically on the mel scale. This is not believed to be the same as critical band filtering.

Critical band filtering is a concept that has a meaning in the art that is different from MFCC. See e.g., http://www.jneurosci.org/cgi/reprint/15/4/2808.pdf

Accordingly, Applicants respectfully request that the examiner withdraw the rejection of claims 1-13, 15, and 17-35 for at least the foregoing reasons.

Claims 17, 26 and 34-35 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Blum in view of Gjerdingen.

Claims 17 and 26 depend from claims 1 and 21, respectively. Applicants submit that they are allowable for at least the reasons cited with respect to the claims from which they depend.

Applicants respectfully submit that nowhere is the art of record believed to teach or suggest the formation of a classification chain data structure that includes ***both spectral perceptual qualities as classified by human experts*** and DSP processed data values. Reconsideration and withdrawal of the rejection to claim 34 is respectfully requested. Claim 35 depends from claim 34 and is believed allowable for the same reasons.

Regarding claim 33, see the preceding argument with respect to claim 30. Gjerdingen teaches a system with human and DSP classification techniques regarding the spectral

properties of media entities.

CONCLUSION

In the view of the foregoing amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. Reconsideration of the application and en early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the application for any reason, the Examiner is encouraged to contact Applicants' representative.

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/Michael J. Swope/
Michael J. Swope
Registration No. 38,041

Woodcock Washburn LLP
Cira Centre
2929 Arch Street, 12th Floor
Philadelphia, PA 19104-2891
Telephone: (215) 568-3100
Facsimile: (215) 568-3439